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1: Adverse Drug React Toxicol Rev. 2000 Aug;19(3):223-40.

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Therapeutic applications of medicinal plants in the treatment of breast cancer: a review of their pharmacology, efficacy and tolerability.

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Various active compounds (or their semi-synthetic derivatives) derived from medicinal plants have been assessed for their efficacy and tolerability in the treatment of breast cancer. Some of these plant species, including Taxus baccata (paclitaxel, docetaxel), Podophyllum peltatum (etoposide), Camptotheca acuminata (camptothecin) and Vinca rosea (vinblastine, vinorelbine) have well recognized antitumour activity in breast cancer, and have been evaluated in clinical trials. For example, results from recent Phase II/III trials have established docetaxel as the most active single agent in the treatment (first or second-line) of advanced metastatic breast cancer. For other plant species such as Panax ginseng and Allium sativum, antitumour activity has been evaluated in experimental studies using cultured cells and animal models, but the therapeutic potential in patients remains to be determined. Antitumour activity derived from medicinal plants may produce results via a number of mechanisms, including effects on cytoskeletal proteins which play a key role in mitosis (paclitaxel), inhibition of activity of topoisomerase enzymes I (camptothecin) or II (etoposide), stimulation of the immune system (Viscum album), or antiprotease-antioxidant activity. Medicinal plant-derived antineoplastic agents may be used in single agent or in combinational therapies, and have been used in first-line or second-line (including anthracycline-refractory patients) treatment of localized or metastatic breast cancer. Adverse effects resulting from the use of these agents include neutropenia and peripheral neuropathies.

Publication Types:
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